

**IMPROVED POPULATED PRINTED WIRING BOARD AND METHOD OF
MANUFACTURE**

ABSTRACT OF DISCLOSURE

5 A populated printed wiring board (PWB) (100) and method of
manufacturing the populated PWB are taught. The populated PWB is
manufactured by fabricating a PWB (102, 402) with exposed copper pads (302),
coating the copper pads with an organic solderability preservative (OSP) (404),
depositing a solder paste that includes lead-free solder on the OSP covered
copper pads (406), placing components (408) and heating the PWB above a
10 liquidous temperature of the lead-free solder in an air atmosphere (410). The
process allows very close spacing of components and component leads while
forming reliable solder joints to components that are mechanically stressed and
components that have non-negligible planarity or coplanarity tolerances.